

WEST[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
L7 and ((502/\$)!.CCLS.)	21

Database:

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Search:

L8

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History**
DATE: Tuesday, October 08, 2002 [Printable Copy](#) [Create Case](#)
Set Name Query
 side by side

Hit Count Set Name
 result set
DB=USPT,PGPB; PLUR=YES; OP=OR

<u>L8</u>	L7 and ((502/\$)!.CCLS.)	21	<u>L8</u>
<u>L7</u>	L6 and l2	282	<u>L7</u>
<u>L6</u>	L1 same (water or aqueous)	33161	<u>L6</u>
<u>L5</u>	L4 and ((149/\$)!.CCLS.)	10	<u>L5</u>
<u>L4</u>	L2 and l1	1738	<u>L4</u>
<u>L3</u>	L2 and l2	45004	<u>L3</u>
<u>L2</u>	airbag or air adj bag or restraint	45004	<u>L2</u>
<u>L1</u>	recycle or recover	142965	<u>L1</u>

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L2 not I1	11

Database:

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IBM Technical Disclosure Bulletins

Search:

L3

Refine Search

Recall Text

Clear

Search History

DATE: Tuesday, October 08, 2002 [Printable Copy](#) [Create Case](#)

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side		result set	
<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>			
<u>L3</u>	L2 not I1	11	<u>L3</u>
<u>L2</u>	guanidine and (dinitramide or dinitramine) and 149/\$.ccls.	14	<u>L2</u>
<u>L1</u>	guanidine same (dinitramide or dinitramine)	3	<u>L1</u>

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L1 same guanidine	3

Database:

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Search:

L6

Refine Search

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Search History**DATE: Tuesday, October 08, 2002**[Printable Copy](#) [Create Case](#)

Set Name Query
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Count Set Name
 result set

DB=USPT,PGPB; PLUR=YES; OP=

<u>L6</u>	L1 same guanidine	3	<u>L6</u>
<u>L5</u>	L1 and guanidine	22	<u>L5</u>
<u>L4</u>	L2 and guanidine	14	<u>L4</u>
<u>L3</u>	L2 and gaunidine	0	<u>L3</u>
<u>L2</u>	L1 and ((149/\$)!.CCLS.)	78	<u>L2</u>
<u>L1</u>	dinitrami\$3	503	<u>L1</u>

END OF SEARCH HISTORY

WEST[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
L7 and ((280/\$)!.CCLS.)	5

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L9

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History**DATE: Tuesday, October 08, 2002 [Printable Copy](#) [Create Case](#)**Set Name Query**
side by side**Hit Count Set Name**
result set

DB=USPT,PGPB; PLUR=YES; OP=OR

<u>L9</u>	L7 and ((280/\$)!.CCLS.)	5	<u>L9</u>
<u>L8</u>	L7 and ((502/\$)!.CCLS.)	21	<u>L8</u>
<u>L7</u>	L6 and l2	282	<u>L7</u>
<u>L6</u>	L1 same (water or aqueous)	33161	<u>L6</u>
<u>L5</u>	L4 and ((149/\$)!.CCLS.)	10	<u>L5</u>
<u>L4</u>	L2 and l1	1738	<u>L4</u>
<u>L3</u>	L2 and l2	45004	<u>L3</u>
<u>L2</u>	airbag or air adj bag or restraint	45004	<u>L2</u>
<u>L1</u>	recycle or recover	142965	<u>L1</u>

END OF SEARCH HISTORY

WEST Search History

DATE: Tuesday, October 08, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB; PLUR=YES; OP=OR</i>			
L11	L2 and ((149/124)!.CCLS.)	2	L11
L10	L2 and ((149/123)!.CCLS.)	1	L10
L9	L7 and ((280/\$)!.CCLS.)	5	L9
L8	L7 and ((502/\$)!.CCLS.)	21	L8
L7	L6 and l2	282	L7
L6	L1 same (water or aqueous)	33161	L6
L5	L4 and ((149/\$)!.CCLS.)	10	L5
L4	L2 and l1	1738	L4
L3	L2 and l2	45004	L3
L2	airbag or air adj bag or restraint	45004	L2
L1	recycle or recover	142965	L1

END OF SEARCH HISTORY

WEST[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
guanidinium near dinitrami\$3	3

Database:

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US Pre-Grant Publication Full-Text Database
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IBM Technical Disclosure Bulletins

Search:

L1

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History****DATE:** Tuesday, October 08, 2002 [Printable Copy](#) [Create Case](#)

Set Name Query
side by side

Hit Count Set Name
result set

DB=USPT,PGPB; PLUR=YES; OP=OR

<u>L1</u>	guanidinium near dinitrami\$3	3	<u>L1</u>
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END OF SEARCH HISTORY

FILE 'HOME' ENTERED AT 17:59:46 ON 08 OCT 2002

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 18:00:01 ON 08 OCT 2002

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 OCT 2002 HIGHEST RN 459783-15-4

DICTIONARY FILE UPDATES: 7 OCT 2002 HIGHEST RN 459783-15-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s guanidinium dinitramide/cn

L1 0 GUANIDINIUM DINITRAMIDE/CN

=> s guanidinium dinitramine

321 GUANIDINIUM

21 DINITRAMINE

L2 0 GUANIDINIUM DINITRAMINE

(GUANIDINIUM(W) DINITRAMINE)

=> s guanidinium (w) dinitramide

321 GUANIDINIUM

35 DINITRAMIDE

L3 1 GUANIDINIUM (W) DINITRAMIDE

=> d

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 174818-96-3 REGISTRY

CN Imidodicarbonimidic diamide, compd. with nitronitramide (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Nitramide, nitro-, compd. with imidodicarbonimidic diamide (1:1) (9CI)

OTHER NAMES:

CN **Biguanidinium dinitramide**

MF C2 H7 N5 . H N3 O4

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 114045-20-4

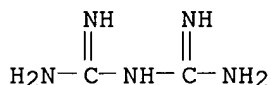
CMF H N3 O4

O₂N-NH-NO₂

CM 2

CRN 56-03-1

CMF C2 H7 N5



4 REFERENCES IN FILE CA (1962 TO DATE)

4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> file ca

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

23.48

23.69

FILE 'CA' ENTERED AT 18:02:53 ON 08 OCT 2002

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=> s l3

L4 4 L3

=> d 1-4

L4 ANSWER 1 OF 4 CA COPYRIGHT 2002 ACS

AN 137:154657 CA
TI Chemical Bonding in Biguanidinium Dinitramide and Biguanidinium
Bis-Dinitramide from Experimental X-ray Diffraction Data
AU Zhurova, Elizabeth A.; Martin, Anthony; Pinkerton, A. Alan
CS Department of Chemistry, University of Toledo, Toledo, OH, 43606, USA
SO Journal of the American Chemical Society (2002), 124(29), 8741-8750
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 4 CA COPYRIGHT 2002 ACS
AN 137:11174 CA
TI Characterizing the Oxygen-Oxygen Interaction in the Dinitramide Anion
AU Zhurova, Elizabeth A.; Tsirelson, Vladimir G.; Stash, Adam I.; Pinkerton,
A. Alan
CS Department of Chemistry, University of Toledo, Toledo, OH, 43606, USA
SO Journal of the American Chemical Society (2002), 124(17), 4574-4575
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
RE.CNT 121 THERE ARE 121 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 4 CA COPYRIGHT 2002 ACS
AN 127:143091 CA
TI Energetic materials: the preparation and structural characterization of
three biguanidinium dinitramides
AU Martin, Anthony; Pinkerton, A. Alan; Gilardi, Richard D.; Bottaro, Jeffrey
C.
CS Dep. Chem., Univ. Toledo, Toledo, OH, 43606, USA
SO Acta Crystallographica, Section B: Structural Science (1997), B53(3),
504-512
CODEN: ASBSDK; ISSN: 0108-7681
PB Munksgaard
DT Journal
LA English

L4 ANSWER 4 OF 4 CA COPYRIGHT 2002 ACS
AN 124:236464 CA
TI Charge densities and electrostatic potentials for energetic materials
AU Pinkerton, A. A.; Martin, A.
CS Department of Chemistry, University of Toledo, Toledo, OH, 43606, USA
SO Materials Research Society Symposium Proceedings (1996),
418(Decomposition, Combustion, and Detonation Chemistry of Energetic
Materials), 49-54
CODEN: MRSPDH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English

=> d 3-4 all

L4 ANSWER 3 OF 4 CA COPYRIGHT 2002 ACS
AN 127:143091 CA
TI Energetic materials: the preparation and structural characterization of
three biguanidinium dinitramides
AU Martin, Anthony; Pinkerton, A. Alan; Gilardi, Richard D.; Bottaro, Jeffrey
C.

CS Dep. Chem., Univ. Toledo, Toledo, OH, 43606, USA
 SO Acta Crystallographica, Section B: Structural Science (1997), B53(3),
 504-512
 CODEN: ASBSDK; ISSN: 0108-7681
 PB Munksgaard
 DT Journal
 LA English
 CC 75-8 (Crystallography and Liquid Crystals)
 Section cross-reference(s): 23
 AB Three biguanidinium salts of the energetic dinitramide anion were prepd.
 and structurally characterized from room-temp. x-ray diffraction data.
 Biguanidinium mono-dinitramide, (BIGH)(DN), is triclinic, space group
 P.hivin.1, a 4.3686(4), b 9.404(2), c 10.742(1) .ANG., .alpha. 83.54(1),
 .beta. 80.386(9), .gamma. 79.93(1).degree., Z = 2, dc = 1.62, R = 0.041.
 Biguanidinium bis-dinitramide, (BIGH2)(DN)2, is monoclinic, space group
 C2/c, a 11.892(2), b 8.131(1), c 13.038(2) .ANG., .beta.
 115.79(1).degree., Z = 4, dc = 1.844, R = 0.0533. Biguanidinium
 bis-dinitramide monohydrate, (BIGH2)(DN)2.H2O, is orthorhombic, space
 group P212121, a 6.4201(6), b 13.408(1), c 14.584(2) .ANG., Z = 4, dc =
 1.76, R = 0.040. At. coordinates are given. All three structures were
 characterized by extensive H bonding. Both the mono- and diprotonated
 cations consist of two planar halves twisted with respect to each other.
 The dinitramide anion has a surprisingly variable and asym. structure.
 The two halves of the anion are twisted with respect to each other;
 however, the twist varies from 5.1 to 28.9.degree.. The two ends of the
 anion have significantly different geometries, e.g. the 'equiv.' N-N bond
 lengths differ by up to 0.045 .ANG..
 ST mol structure biguanidinium dinitroamide; hydrogen bond biguanidinium
 dinitroamide
 IT Crystal structure
 Molecular structure
 (of biguanidinium dinitramides)
 IT **174818-96-3P** 174818-97-4P 193151-09-6P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and crystal structure of)
 L4 ANSWER 4 OF 4 CA COPYRIGHT 2002 ACS
 AN 124:236464 CA
 TI Charge densities and electrostatic potentials for energetic materials
 AU Pinkerton, A. A.; Martin, A.
 CS Department of Chemistry, University of Toledo, Toledo, OH, 43606, USA
 SO Materials Research Society Symposium Proceedings (1996),
 418(Decomposition, Combustion, and Detonation Chemistry of Energetic
 Materials), 49-54
 CODEN: MRSPDH; ISSN: 0272-9172
 PB Materials Research Society
 DT Journal
 LA English
 CC 50-2 (Propellants and Explosives)
 Section cross-reference(s): 22
 AB High-resoln. (sin.theta./lambda. < 1.34 .ANG.-1), low-temp. (85 K) x-ray
 diffraction data were used to map the deformation d. and the derived
 electrostatic potential for three dinitramide salts. The traditional
 presentation of contour maps was replaced with 3-dimensional views of the
 mol. A comparison of the dinitramide ions from each salt was presented.
 ST dinitramide anion electrostatic potential charge density; ammonium
 dinitramide electrostatic potential charge density; biguanidinium
 dinitramide electrostatic potential
 IT Explosives
 (charge densities and electrostatic potentials for ammonium and
 biguanidinium dinitramide salts)
 IT Electric potential
 (electrostatic, for ammonium and biguanidinium dinitramide salts)

IT 134757-80-5
 RL: PRP (Properties)
 (charge densities and electrostatic potentials for ammonium and
 biguanidinium dinitramide salts)

IT 140456-78-6
 RL: PRP (Properties)
 (charge densities and electrostatic potentials for ammonium
 dinitramide)

IT **174818-96-3** 174818-97-4
 RL: PRP (Properties)
 (charge densities and electrostatic potentials for biguanidinium
 dinitramide salts)

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
10.82	34.51

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-1.18	-1.18

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STN INTERNATIONAL LOGOFF AT 18:06:31 ON 08 OCT 2002